

REMARKS

Claims 1-10 are pending in this application. By this Amendment, claims 1, 9 and 10 are amended. Support for the amendments to claims 1, 9 and 10 can be found in the specification as originally filed, for example, at page 6, lines 1-6; page 16, lines 4-15, and in claims 1, 9 and 10 as originally filed. Thus, no new matter is added by these amendments.

I. Claim Rejections Under 35 U.S.C. §112 and §101

The Office Action rejects claims 9 and 10 under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as the invention. The Office Action also rejects claims 9 and 10 under 35 U.S.C. §101. In particular, the Office Action takes the position that claims 9 and 10 are indefinite and improper because these claims provide for a use of a composition without setting forth any positive steps for such use.

While Applicants do not necessarily agree with these rejections, claims 9 and 10 have been amended to set forth the step of applying the composition to a substrate. Applicants respectfully submit that the amendments to claims 9 and 10 overcome the rejections under §112 and §101. Accordingly, reconsideration and withdrawal of these rejections is respectfully requested.

II. Claim Rejections

A. U.S. Patent No. 3,565,859 to Calas et al.

The Office Action rejects claims 1 and 4-8 under 35 U.S.C. §102(b) over U.S. Patent No. 3,565,859 to Calas et al. Applicants respectfully traverse this rejection.

Independent claim 1 sets forth a "coating composition comprising a silicon heterocyclic compound and a hydroxyl-reactive cross-linker, wherein the silicon heterocyclic compound is a compound comprising at least one spiro-ortho silicate group, characterized in that hydroxyl-reactive groups of the hydroxyl-reactive cross-linker are selected from the

group consisting of isocyanate groups, thiocyanate groups, epoxy groups, episulfide groups, acetal groups, carboxylic acid groups, carboxylic anhydride groups, carboxylic acid ester groups, carbodiimide groups, alkoxy silane groups, Michael-acceptor groups, etherified amino groups and mixtures thereof." Claims 4-8 depend from claim 1 and include all of the limitations thereof.

Calas teaches compositions, which vulcanize when exposed to moisture, containing tetrasubstituted ethylenedioxysilanes mixed with α,ω -dihydroxy-diorganopolysiloxanes. *See* Calas, Abstract. Calas discloses that organic or mineral acids may be employed to promote vulcanization. *See* Calas, col. 3, lines 32-37. In addition, Calas teaches that 0.05 to 10 molecules of orthosilicate ester be included for each OH group of the diorganopolysiloxane, and that diluents may also be used. *See* Calas, col. 2, line 63 - col. 3, line 5; col. 3, lines 19-31.

However, Calas does not teach all of the limitations of independent claim 1. Specifically, Calas does not disclose compositions that include a hydroxyl-reactive cross-linker, and, in particular, does not disclose hydroxyl-reactive cross-linkers having hydroxyl-reactive groups selected from isocyanate groups, thiocyanate groups, epoxy groups, episulfide groups, acetal groups, carboxylic acid groups, carboxylic anhydride groups, carboxylic acid ester groups, carbodiimide groups, alkoxy silane groups, Michael-acceptor groups, etherified amino groups and mixtures thereof, as in instant claim 1. *See generally* Calas.

In claim 1, the hydroxyl-reactive cross-linker, which contains hydroxyl-reactive groups selected from the list set forth above, allows the preparation of a cured coating composition that is essentially free of unreacted low-molecular weight blocking agents. *See* Specification, page 3, lines 9-12. This is due to the reaction of deblocked alcoholic hydroxyl groups on the silicon heterocyclic compound reacting with the hydroxyl-reactive groups to cross-link the polymer and the condensation reaction of the silanol groups with each other

and/or the hydroxyl-reactive cross-linker. *See* Specification, page 3, lines 4-9. In contrast, Calas does not provide any teachings relating to hydroxyl-reactive cross-linkers, such as those set forth in claim 1, or their reaction with its silicon-containing compounds. *See generally* Calas. Rather, Calas teaches only organic or mineral acids to increase vulcanization. *See* Calas, col. 3, lines 32-37. Thus, Calas does not disclose all of the limitations of claim 1 or its dependent claims.

For at least these reasons, Applicants respectfully submit that claims 1 and 4-8 are patentable over Calas. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

B. U.S. Patent No. 3,926,896 to Dumoulin

The Office Action rejects claims 1, 6 and 8 under 35 U.S.C. §102(b) over U.S. Patent No. 3,926,896 to Dumoulin. The Office Action also rejects claim 4 under 35 U.S.C. §103(a) over U.S. Patent No. 3,926,896 to Dumoulin. Applicants respectfully traverse these rejections.

Claim 1 is set forth above. Claims 4, 6 and 8 depend from claim 1 and incorporate all of the limitations of claim 1.

Dumoulin teaches nonstick coating compositions composed of dimethylpolysiloxane polymers and silicate esters, along with a condensation catalyst, an organic titanium derivative and an organic solvent. *See* Dumoulin, Abstract; col. 1, lines 38-68; col. 3, lines 24-26.

However, Dumoulin does not teach, nor does it suggest, all of the elements of independent claim 1. Specifically, Dumoulin does not disclose, nor does it suggest, compositions that include a hydroxyl-reactive cross-linker, and, in particular, does not teach or suggest hydroxyl-reactive cross-linkers having hydroxyl-reactive groups such as those set forth in instant claim 1. *See generally* Dumoulin.

As discussed above, claim 1 includes hydroxyl-reactive cross-linkers, having hydroxyl-reactive groups selected from those listed in claim 1, that permit the reaction of deblocked alcoholic hydroxyl groups on the silicon heterocyclic compound reacting with the hydroxyl-reactive groups to cross-link the polymer and the condensation reaction of the silanol groups with each other and/or the hydroxyl-reactive cross-linker. *See* Specification, page 3, lines 4-12. A cured coating composition that is essentially free of unreacted low-molecular weight blocking agents can thus be obtained. *See* Specification, page 3, lines 9-12.

In contrast, Dumoulin does not provide any teachings relating to hydroxyl-reactive cross-linkers, such as those set forth in claim 1, or their reaction with its silicon-containing compounds. *See generally* Dumoulin. Rather, Dumoulin teaches only dimethylpolysiloxane polymers and condensation catalysts, which may be organic derivatives of tin, carboxylic acid metal salts or polymers having recurring Ti-O-Sn units. *See* Dumoulin, col. 2, lines 28-48, col. 2, line 60 - col. 3, line 24. However, Dumoulin does not disclose or suggest hydroxyl-reactive cross-linkers having groups selected from of isocyanate, thiocyanate, epoxy, episulfide, acetal, carboxylic acid, carboxylic anhydride, carboxylic acid ester, carbodiimide, alkoxy silane, Michael-acceptor and etherified amino groups and mixtures thereof, as set forth in claim 1, and does not provide any motivation to replace dimethylpolysiloxane polymers and/or condensation catalysts of its composition with hydroxyl-reactive cross-linkers as those set forth in claim 1. *See generally* Dumoulin. Dumoulin merely teaches that its compositions contain dimethylpolysiloxane polymers and condensation catalysts, and does not contemplate the benefits that can be obtained by including hydroxyl-reactive cross-linkers as those set forth in claim 1. *See generally* Dumoulin.

For at least these reasons, Applicants respectfully submit that claims 1, 4, 6 and 8 are patentable over Dumoulin. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

III. Allowable Subject Matter

Applicants thank the Examiner for the indication that claims 2 [sic] and 3 contain allowable subject matter. For at least the reasons set forth above, Applicants respectfully submit that claims 2 and 3 depend from an allowable claim and are themselves in condition for allowance.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-10 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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